

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A sound reproduction system comprising a digital audio signal input ~~(1)~~, a digital audio signal processor ~~(2, DSP)~~ and a digital audio signal output ~~(1)~~ wherein the digital signal processor ~~(2, DSP)~~ comprises a ~~high-high-pass~~ (HP) filter ~~(21)~~ with having a pass frequency (f) ~~ef~~ between a first and a second frequency, a compressing amplifier ~~(22)~~ for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level, wherein the sound reproduction system further comprises a measuring device for measuring background noise, and an adaptor for adapting one or more parameters (f, order) of the high-pass filter in dependence on the measured background noise.

2. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the pass frequency (f) is a frequency between 300 Hz and 2 kHz.

3. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the ~~high-high-pass~~ filter is a first order or second order filter.

4. (Cancelled).

5. (Currently Amended) A The sound reproduction system as claimed in claim 41, wherein the pass frequency is adaptable between 50 and 2 kHz.

6. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the compressing amplifier is arranged not to amplify a signal having a signal strength below a threshold value.

7. (Currently Amended) A sound reproduction system comprising a digital audio signal input, a digital audio signal processor and a digital audio signal output, wherein the digital signal processor comprises a high-pass (HP) filter having a pass frequency (f) between a first and a second frequency, a compressing amplifier for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level~~as claimed in claim 1~~, wherein the device ~~sound reproduction system further~~ comprises a measuring device 130 for measuring background noise, and an adaptor 131 for adapting one or more parameters ~~for~~ of the compressing amplifier ~~(22)~~ in dependence on the measured background noise.

8. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the digital audio processor further

comprises a ~~low-low-pass~~ filter (23) for filtering the signal provided by the compressing amplifier and for providing an output signal, the pass frequency of the ~~low-low-pass~~ filter (f') lying in the range $2 \text{ kHz} - F_s/2$, where F_s is the ~~a~~ sampling frequency.

9. (Currently Amended) A sound reproduction system comprising a digital audio signal input, a digital audio signal processor and a digital audio signal output, wherein the digital signal processor comprises a high-pass (HP) filter having a pass frequency (f) between a first and a second frequency, a compressing amplifier for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level~~as claimed in claim 8~~, wherein the ~~device-sound reproduction system further~~ comprises a measuring device 130 for measuring background noise, and an adaptor 131 for adapting one or more parameters (f'') ~~for~~of the low-low-pass filter in dependence on the measured background noise.

10. (Currently Amended) A ~~The~~ sound reproduction system as claimed in claim 9, wherein the sound reproduction system further comprises a ~~means for activation and/or setting of~~ the frequency dependence of the ~~low-low-pass~~ filter in dependence on the amplification in the compressing amplifier.

11. (Currently Amended) A ~~The~~ sound reproduction system as claimed in any one of the ~~claims 41, 7 or 9~~, wherein the one or more of the said parameters is a non-linear function of the measured noise level.

12. (Currently Amended) A ~~The~~ sound reproduction system as claimed in claim 1, wherein the sound reproduction system comprises the ~~high-high-pass filter being~~ followed by an AGC followed by a limiter/clipper.

13. (Currently Amended) A ~~The~~ sound reproduction system as claimed in claim 1, wherein the sound reproduction system further comprises an automatic volume leveler preceded, or preferably, followed by the ~~high-high-pass filter~~, providing a leveled signal, followed by a gain and a clipper.

14. (Currently Amended) A method for processing digital sound signals in which method comprising the steps of:
attenuating frequency component-components of the a sound
signal lower than a cut-off frequency (f) between a first and a second frequency ~~are attenuated,~~
amplifying and compressing the sound signals are amplified
and compressed signal to within a signal band width; and
clipped-clipping the sound signal above a clipping level within the signal band width,
wherein said method further comprises the steps of:

measuring a background noise level; and
determining the cut-off frequency (f) in dependence on the
measured background noise level (S).

15. (Currently Amended) A-The method as claimed in claim ~~13~~14,
wherein the cut-off frequency is between 300 Hz and 2 kHz.

16. (Cancelled).

17. (Currently Amended) A-The method as claimed in claim ~~16~~14,
wherein the cut-off frequency is determined by a non-linear
function of the noise level (S).

18. (Currently Amended) A-The method as claimed in claim ~~16~~14,
wherein the cut-off frequency ranges between 50 Hz and 2 kHz.

19. (Currently Amended) A-The method as claimed in claim ~~13~~14,
wherein said method further comprises, after ~~compression~~ ~~said~~
amplifying and compressing step and said clipping step, attenuating
frequency components of the resulting digital signal below a ~~cut~~
cut-off frequency f' between 2 and 4 kHz~~-are attenuated.~~

20. (Currently Amended) A-The method as claimed in claim 19,
wherein the method further comprises the step of:

~~_____ a noise level is measured and determining~~ the cut-off frequency (f'') ~~is determined~~ in dependence on the measured background noise level (S).

21. (Currently Amended) ~~A~~ The method as claimed in claim 20, wherein the cut-off frequency (f'') is determined by a non-linear function of the noise level (S).

22. (Cancelled).

23. (Currently Amended) ~~Computer~~ A computer-readable medium having stored thereon a computer program comprising program code means for performing a method as claimed in any one of claims 13 14, 15 and 17 to 22-21 when said program is run on a computer.

24. (Cancelled).